MagaBio plus Whole Blood Genomic DNA Purification Kit II

【Kit Components】

Cat#	BSC73S1E	BSC73S1B	BSC73M1B
Components	**32 Tests**	**50 Tests**	**100 Tests**
PK Solution	320 μL	500 μL	1.0 mL
Binding Buffer	16 mL	25 mL	50 mL
Lysis Buffer	96 Well pre-loaded plate 2 Pieces	12 mL	24 mL
WB1 Buffer		14 mL (add 21 mL absolute ethanol before use)	26mL (add 39 mL absolute ethanol before use)
Wash Buffer		15 mL×2 (add 35 mL absolute ethanol before use)	30 mL×2 (add 70 mL absolute ethanol before use)
Elution Buffer		10 mL	20 mL
MagaBio Reagent		1.0 mL	1.0 mL×2
Handbook	1	1	1

【Storage and expiry date】

- The kit can be transported at room temperature.
- The kit should be stored at 2~8℃.
- All reagents are valid for 12 months if stored properly.

【Introduction】

The kit provides a very simple, fast and cost effective technique to isolate high quality DNA. Using one simple protocol, high yield of purified DNA can be isolated from whole blood. MagaBio sample processing is based on proprietary magnetizable particles--MagaBio Reagent. The pure DNA can be applied extensively in PCR, Real-time PCR,sequencing, Southern hybridization, mutant analysis, SNP and the others.

According to the special interaction, use MagaBio nucleic acid separation system with a general protocol---sample processing, MagaBio adsorption, washing and elution, and can go high-throughput.

【Principle and Advantage】

DNA in the sample is released by PK Solution and Lysis Buffer. Released DNA is bound exclusively and specifically to the MagaBio Reagent. DNA bound to Magnetic particles are captured by a magnetic tool and contaminants are removed by Wash Buffer once or more. The DNA is then eluted from particles by Elution Buffer or molecular grade water.

【Apparatus and materials to be prepared by the user】

1. Magnetic Rack or Bioer NPA-32P purification instrument;
2. Water bath or Dry bath;
3. Vortex mixer;
4. Absolute alcohol (For BSC73S1B and BSC73M1B).

【Important Notes】

- Add the ethanol (as the volume marked on bottle label) to the WB1 Buffer and mix them well.
- Add the ethanol (as the volume marked on bottle label) to the Wash Buffer and mix them well.

- The following procedures are applicable to the Bioer NPA-32P purification instrument. If use other purification instrument, the operating procedures shall be adjusted according to the performance of different instruments.

【Protocol】

The manual purification

Please add absolute ethanol to WB1 Buffer and Wash Buffer and mix thoroughly before the first use.

1. Sample processing

1) Equilibrate all reagents and samples to room temperature.
2) Pipet 10μL of PK Solution into the bottom of a 1.5 mL microcentrifuge tube.
3) Add 200μL-240μL of sample to the microcentrifuge tube from the above.
4) Add Equal volume of the Lysis Buffer to the sample from the above and mix by pulse-vortexing intensively for 15-20 seconds.

   Note: Mix the Lysis Buffer thoroughly before use, make sure that no crystal in the Lysis Buffer.
5) Incubate at 70℃ for 10 minutes. Mixing every 5 minutes.
6) Remove the tube from 70℃.

2. MagaBio adsorption

1) Add 500μLof the Binding Buffer and 20 μL of the **well-mixed** (particles should be suspended) MagaBio Reagent.
2) Mix the tube gently and incubate for 10 minutes at room temperature while mixing.
3) Aggregate MagaBio particles bound with DNA by using a magnetic rack. Discard the supernate, remove the tube from the magnetic rack and wash particles as described below.

3. Washing

1) Add 600μL of WB1 Buffer to the tube from the above. Mix well by inverting the tube several times to ensure the particles are completely dispersed. Sediment the particles on the magnetic rack and discard the supernate.
2) Add 600μL of Wash Buffer to the tube from the above. Mix well by inverting the tube several times to ensure the particles are completely dispersed. Aggregate the particles on the magnetic rack and discard the supernate.
3) Remove the tube from the magnetic rack and repeat washing step 2）one more time follow the above step.
4) Open the cap, dry at room temperature for 5 minutes.

4. Elution

1) Add 100μL of Elution Buffer and mix, incubate at 70℃ for 5 minutes.

   Note: Vortex gently every 2-3 minutes.
2) Aggregate the particles on the magnetic rack and transfer the supernate contained the isolated DNA carefully into a clean tube. The product is ready for further analysis. If the isolated DNA sample is not going to be tested on the same day, freeze at -20℃.

【The automatic purification】

With automatic machine, the kit is highly suitable for various samples, which provide a convenient platform to

achieve high-throughput and fast and effective purification.

1. Reagent preparation

1) For BSC73S1B and BSC73M1B

Add 240μL Lysis Buffer to the 2.2mL 96 Deep Well column 1 and 7; 600μL WB1 Buffer to column 2 and 8; 600μL Wash Buffer to column 3,4 and 9, 10; 100μL Elution Buffer to column 5and 11; 180μL Pure Water and 20μL MagaBio Reagent to column 6 and 12.

2) For BSC73S1E

Turn the 96-well plate upside down three times after placed at room temperature, then rip off plastic film, centrifuge in 96-well centrifuge for seconds (or swing by hand) to avoid adhered liquid. Rip off aluminum foil film of 96-well plate; make sure the direction of the plate (magnetic beads in column 6th&12th).

2. Add 200μL-240μL sample and 10μL PK Solution to the 96-Deep Well column 1 and 7.

3. Put 96-Deep Well plate into the instrument, then plugs in 8-strip Tip and start the program I.

Step	Well	Name	Waiting Time（min ： ss）	Mixing Time（min ： ss）	Magnet Time（min ： ss）	Adsorption	Speed	Volume（μL）
1	1	Lysis	00 : 00	10 : 00	00 : 00	Normal	F	500
2	1	Lysis	00 : 00	00 : 05	00 : 00	Normal	F	500

Lysis temperature : 70℃, lysis heating end step 2.

4. After step 3, take out the 96 Deep Well, don't take 8-strip out. Add 500μL of the Binding Buffer to the 96-Deep Well column 1 and 7, put 96-Deep Well plate into the instrument and start the program II.

Step	Well	Name	Waiting Time（min ： ss）	Mixing Time（min ： ss）	Magnet Time（min ： ss）	Adsorption	Speed	Volume（μL）
1	1	Lysis	00 : 00	02 : 00	00 : 00	Normal	F	1000
2	6	Beads	00 : 00	00 : 15	00 : 30	Strong	S	200
3	1	Binding	00 : 00	10 : 00	01 : 00	Strong	F	1000
4	2	Wash 1	00 : 00	02 : 00	01 : 00	Strong	F	600
5	3	Wash 2	00 : 00	01 : 00	01 : 00	Strong	F	600
6	4	Wash 3	00 : 00	01 : 00	01 : 00	Strong	F	600
7	5	Elution	01 : 00	05 : 00	01 : 00	Normal	F	100
8	6	Discard	00 : 00	00 : 30	00 : 00	Normal	S	200

Elution temperature :75℃, elution start heating step 7 .

【Analysis of Nucleic Acid】

Get some DNA,diluted in a advisable factor with elution buffer.

Survey the OD260, OD280 and OD320.

Concentration（ng/μL）＝50×OD260×dilution fact

1.7≤OD260-320/ OD280-320≤2.1

Notice: 0.1≤OD260≤1.0, the result of ratio is much reliable.

【Basic Information】

Hangzhou Bioer Technology Co.,Ltd

Address: No.1192 Bin'An Rd, Binjiang District, Hangzhou, Zhejiang Province, China

Tel: 0571-87774567 Fax: 0571-87774553

Web: www.bioer.com.cn

Zip Code: 310053

Aftersales Service Provider: Hangzhou Bioer Technology Co.,Ltd